



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

Print

Purchasing Receipts

| PO No | Supplier | Line Item No | Rel No | Terms | Purchased Item | Description | For Part No | Project | Equipment ID | Order Qty | Due Date | Received Quantity | Accounting Job No | Container No | Status | Receive Date | Price/Unit | Aging Days | Past Due | Total | Supplier Name |
|----------|-----------|--------------|--------|----------------|----------------|--|-------------|---------|--------------|-----------|----------|-------------------|-------------------|--------------|----------|--------------|----------------|------------|----------|----------|--------------------------|
| PO040106 | MCM001-VU | 1 | | 1 2% 10 Net 30 | 6381K193 | Bushing receive pcs | | | | 25 | 6/8/2018 | 25 | | S079289 | Stock | 6/8/2018 | \$ 3.68 / pcs | 0 | | \$92.00 | McMaster-Carr Supply Co. |
| | | 2 | | | 90293A113 | Quick Release Pin 1/4" dia. 1-1/2" Length | | | | 5 | | 5 | | S079290 | Stock | 6/8/2018 | \$ 20.57 / Ea | 0 | | \$102.85 | McMaster-Carr Supply Co. |
| | | 3 | | | MDLIRNR5.000W | M-Delrin Round Bar White | | | | 3 | | 3 | | S079302 | Stock | 6/8/2018 | \$ 144.05 / ft | 0 | | \$432.15 | McMaster-Carr Supply Co. |
| | | 4 | | | 8599K32 | Strap 2 pcs of 12" x 12" | | | | 2 | | 2 | | S079291 | Stock | 6/8/2018 | \$ 21.97 / sf | 0 | | \$43.94 | McMaster-Carr Supply Co. |
| | | 5 | | | 90477A030 | Rotating Flange Nut | | | | 10 | | 10 | | S079292 | Stock | 6/8/2018 | \$ 3.94 / Ea | 0 | | \$39.40 | McMaster-Carr Supply Co. |
| | | 6 | | | 92865A597 | Medium-Strength Grade 5 Steel Hex Head Screw | | | | 2 | | 2 | | S079293 | Stock | 6/8/2018 | \$ 0.86 / Ea | 0 | | \$1.72 | McMaster-Carr Supply Co. |
| | | 7 | | | 97416A123 | Black-Oxide Steel SAE Washer | | | | 100 | | 1 | | S079294 | Stock | 6/8/2018 | \$ 0.10 / Ea | 0 | | \$0.10 | McMaster-Carr Supply Co. |
| | | 8 | | | EL-PLUG-F | 3-Prong Female Spade Plug | | | | 6 | | 99 | | S079304 | Inactive | 6/8/2018 | \$ 0.10 / Ea | 0 | | \$10.28 | McMaster-Carr Supply Co. |
| | | 9 | | | EL-PLUG-M | 3-Prong Male Spade Plug | | | | 15 | | 1 | | S079295 | Stock | 6/8/2018 | \$ 12.23 / Ea | 0 | | \$12.23 | McMaster-Carr Supply Co. |
| | | 10 | | | 3408A59 | Ball Plunger | | | | 5 | | 5 | | S079297 | Stock | 6/8/2018 | \$ 7.03 / Ea | 0 | | \$105.45 | McMaster-Carr Supply Co. |
| | | | | | | | | | | | | | | | Stock | 6/8/2018 | \$ 7.77 / pcs | 0 | | \$38.86 | McMaster-Carr Supply Co. |

Print

| PO No | Supplier | Line Item No | Rel No | Terms | Purchased Item | Description | For Part No | Project | Equipment ID | Order Qty | Due Date | Received Quantity | Accounting Job No | Container No | Status | Receive Date | Price/Unit | Aging Days | Past Due | Total | Supplier Name |
|--------|----------|--------------|--------|-------|----------------|------------------------|-------------|---------|--------------|-----------|----------|-------------------|-------------------|--------------|--------|--------------|---------------|------------|----------|------------|--------------------------|
| | | 11 | | | 90273A542 | Screw receive ea | | | | 100 | | 100 | | S079279 | Stock | 6/8/2018 | \$ 0.10 / Ea | 0 | | \$9.80 | McMaster-Carr Supply Co. |
| | | 12 | | | MDLRLNR2.500W | Delrin Round Bar 2.500 | | | | 5 | | 5 | | S079305 | Stock | 6/8/2018 | \$ 30.13 / ft | 0 | | \$150.65 | McMaster-Carr Supply Co. |
| Total: | | | | | | | | | | 286 | | 281 | | | | | | | | \$1,046.33 | |

Plex 6/8/2018 11:03 AM dart.Tollis.Andrew



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO040106

Supplier: MCM001-VU
McMaster-Carr Supply Co.
P.O. Box 7690
Chicago, IL 60680-7690 USA
Phone: 330 995 5500
Fax: 330 995 9600

PO No: PO040106

PO Date: 6/5/18

Due Date: 6/8/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

E-MAILED
JUN 05 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: 2% 10 Net 30

Freight Terms:

Special Comments:

| Items | | | | | | | | | | |
|-----------|----------------|--------------------------|--|--------|----------|----------------|-------------------|---------|---------------------|-------------------|
| Line Item | Part | Supplier Part No | Description | Status | Due Date | Order Quantity | Received Quantity | Balance | Unit Price (USD) | Extended Price |
| 1 | 6381K193 | 1/pk | Bushing receive pcs | Firmed | 6/8/18 | 25 pcs | 0 pcs | 25 pcs | \$3.68/pcs | \$92.00 |
| 2 | 90293A113 | 1/pk | Quick Release Pin 1/4" dia., 1-1/2" Length | Firmed | 6/8/18 | 5 Ea | 0 Ea | 5 Ea | \$20.57/Ea | \$102.85 |
| 3 | MDELIRNR5.000W | 8572K38 | M-Delrin Round Bar, White | Firmed | 6/8/18 | 3 ft | 0 ft | 3 ft | \$144.05/ft | \$432.15 |
| 4 | 8599K32 | 12" x 12" | Strap 2 pcs of 12" x 12" | Firmed | 6/8/18 | 2 sf | 0 sf | 2 sf | \$21.97/sf | \$43.94 |
| 5 | 90477A030 | | Rotating Flange Nut | Firmed | 6/8/18 | 10 Ea | 0 Ea | 10 Ea | \$3.94/Ea | \$39.40 |
| 6 | 92865A597 | 5/pk | Medium-Strength Grade 5 Steel Hex Head Screw | Firmed | 6/8/18 | 10 Ea | 0 Ea | 10 Ea | \$0.862/Ea | \$8.62 |
| 7 | 97416A123 | 100/pk | Black-Oxide Steel SAE Washer | Firmed | 6/8/18 | 100 Ea | 0 Ea | 100 Ea | \$0.1038/Ea | \$10.38 |
| 8 | EL-PLUG-F | 7216k6 1/pk color yellow | 3-Prong Female Spade Plug | Firmed | 6/8/18 | 6 Ea | 0 Ea | 6 Ea | \$12.23/Ea | \$73.38 |
| 9 | EL-PLUG-M | 7216k5 1/pk color yellow | 3-Prong Male Spade Plug | Firmed | 6/8/18 | 10 Ea | 0 Ea | 10 Ea | \$7.03/Ea | \$70.30 |
| 10 | 3408A59 | | Ball Plunger | Firmed | 6/8/18 | 5 pcs | 0 pcs | 5 pcs | \$7.7719/pcs | \$38.86 |
| 11 | 90273A542 | 100/pk | Screw receive ea | Firmed | 6/8/18 | 100 Ea | 0 Ea | 100 Ea | \$0.098/Ea | \$9.80 |
| 12 | MDELIRNR2.500W | 8572k32 | Delrin Round Bar 2.500 | Firmed | 6/8/18 | 5 ft | 0 ft | 5 ft | \$30.13/ft | \$150.65 |
| | | | | | | | | | Grand Total: | \$1,072.33 |

Order Notes

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 DOCUMENT SPECIAL REQUIREMENTS

A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 6/5/18 12:36 PM dart.lavoie.chantal

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada
Attention: Chantal Lavoie

Purchase Order
PO040106

Order Placed By
Chantal Lavoie

McMaster-Carr Number
4531932-03

Page 1 of 1

06/05/2018

| Line | Product | Ordered | Shipped |
|------|--|------------|---------|
| 1 | 6381K193 Multipurpose SAE 660 Leaded Bronze Sleeve Bearing for 3/4" Shaft Diameter and 1" Housing ID, 1-1/4" Long | 25 Each | 25 |
| 2 | 90293A113 T-Handle Push-Button Quick-Release Pin, 1/4" Diameter, 1-1/2" Usable Length | 5 Each | 5 |
| 4 | 8599K32 Fabric-Reinforced Multipurpose Neoprene Sheet, High-Strength, 12" x 12", 3/32" Thick | 2 Each | 2 |
| 5 | 90477A030 Rotating Flange Nut, Black-Oxide Steel, 5/16"-18 Thread Size | 10 Each | 10 |
| 6 | 92865A597 Medium-Strength Grade 5 Steel Hex Head Screw, Zinc-Plated, 5/16"-18 Thread Size, 3-1/2" Long, Fully Threaded, Packs of 5 | 2 Packs | 2 |
| 7 | 97416A123 Black-Oxide Steel SAE Washer for 5/16" Screw Size, 0.344" ID, 0.688" OD, Packs of 100 | 1 Pack | 1 |
| 8 | 7216K6 Hinged Straight-Blade Housing, 3-Slot Socket, NEMA 5-15, Yellow | 6 Each | 6 |
| 9 | 7216K5 Hinged Straight-Blade Housing, Hinged, 3-Blade Plug, Grounded, NEMA 5-15, Yellow | 10 Each | 10 |
| 10 | 3408A59 Slotted Spring Plunger with 440C Stainless Steel Ball-Nose, 18-8 Stainless Steel Body, 5/8"-11, 7-50 lb. Force, with Thread Lock | 5 Each | 5 |

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada
Attention: Chantal Lavoie

Purchase Order
PO040106

Order Placed By
Chantal Lavoie

McMaster-Carr Number
4531932-11

Packing List

Page 1 of

06/05/2018

| Line | Product | Ordered | Shipped |
|------|---|-----------|---------|
| 1 | 90273A542 Steel Phillips Flat Head Screw, 82 Degree Countersink Angle, 1/4"-20 Thread Size, 1" Long, Packs of 100 | 1 Pack | 1 |

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada
Attention: Chantal Lavoie

Purchase Order
PO040106

Order Placed By
Chantal Lavoie

McMaster-Carr Number
4531932-01

Page 1 of 1

06/05/2018

| Line | Product | Ordered | Shipped |
|------|---|-----------|---------|
| 3 | 8572K38 White Delrin Acetal Resin Rod, 5" Diameter, 3' Length | 3 Feet | 3 |

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada
Attention: Chantal Lavoie

Purchase Order
PO040106

Page 1 of 1

Order Placed By
Chantal Lavoie

06/05/2018

McMaster-Carr Number
4531932-02

| Line | Product | Ordered | Shipped |
|------|---|-----------|---------|
| 11 | 8572K32 White Delrin Acetal Resin Rod, 2-1/2" Diameter, 5' Length | 5 Feet | 5 |

McMaster-Carr Supply Company
 200 Aurora Industrial Pkwy
 Aurora, OH 44202-8087 USA
 Phone: 330-995-5500 Fax: 330-995-9600
 E-Mail: cle.sales@mcmaster.com
 Employer Identification Number (EIN): 36-1458720

Invoice: 64590458
 Purchase Order: PO040106
 Release:
 McMaster-Carr Number: 4531932-11

ORIGINAL COMMERCIAL
INVOICE
 CERTIFICATE OF ORIGIN

Ultimate Destination:
 Dart Aerospace Ltd
 1270 Aberdeen St
 Hawkesbury ON K6A 1K7
 Canada

Shipped: 05-Jun-2018
 Shipper's Export Declaration (SED):
 NO EEI 30.36

Intermediate Consignee:

Bill To:
 Dart Aerospace Ltd
 1270 Aberdeen St
 Hawkesbury ON K6A 1K7
 Canada

Forwarding Agent:

Tax Number:

Billing Attention:
 Shipping Chantal Lavoie
 Attention:
 Contact:

| Line | Description | Qty & Unit | Unit Price | Extension |
|------|---|------------|------------|-----------|
| 1 | 90273A542 Steel Phillips Flat Head Screw, 82 Degree Countersink Angle, 1/4"-20 Thread Size, 1" Long, Packs of 100 Country of Origin: Peoples Republic of China Schedule B #: 731815 ECCN #: EAR99 NLR NOTE These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations. NOTE Tracking number(s) for this shipment: 438236937676 | 1 PK | \$9.80 | \$9.80 |

Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.

Shipping Weight (in kgs): 1
 Number of Packages: 1
 Package Dimensions:
 25 X 16 X 8 CM = .003 CUBIC M

Invoice Amounts:
 Merchandise Amount: \$9.80
 Total (In USD): \$9.80

Payment Terms: 2% discount on merchandise only if paid within 10 days, net 30 days

Authorized Signature:
Sarah Weinberg
 Name: Sarah Weinberg
 Title: Operations Mgr.
 Date: 05-Jun-2018

Remit payment to:
 (by mail)
 McMaster-Carr Supply Company
 PO Box 7690
 Chicago, IL 60680-7690 USA
 (by wire transfer)
 Bank of America
 222 Broadway
 New York, NY 10038
 Account 86666-02021
 SWIFT BOFAUS3N

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: Delkin R5.000w
DATE: JUN 11 2018

PO / BATCH NO.: 040106/5029302

MATERIAL CERT REC'D: yes
QUANTITY RECEIVED: 3'
QUANTITY INSPECTED: 3'
QUANTITY REJECTED: 0

THICKNESS ORDERED: 5.000
THICKNESS RECEIVED: 5.000
SHEET SIZE ORDERED: _____
SHEET SIZE RECEIVED: _____

| DESCRIPTION | NCR (Check Y/N) | | COMMENTS |
|---|------------------------------------|------------------------------------|----------------------------|
| SURFACE DAMAGE | Y | <input checked="" type="radio"/> N | |
| CORRECT FINISH | <input checked="" type="radio"/> Y | N | |
| CORROSION | Y | <input checked="" type="radio"/> N | |
| CORRECT GRAIN DIRECTION | <input checked="" type="radio"/> Y | N | |
| CORRECT MATERIAL PER M-DRAWING | <input checked="" type="radio"/> Y | N | Delkin Acetal Rod white |
| CORRECT THICKNESS | <input checked="" type="radio"/> Y | N | |
| PHOTO REQUIRED | Y | <input checked="" type="radio"/> N | |
| CORRECT REF # TO LINK CERT | <input checked="" type="radio"/> Y | N | PO # 040106 Part # 8572X38 |
| CORRECT MATERIAL IDENTIFICATION | <input checked="" type="radio"/> Y | N | |
| CORRECT M# ON THE MATERIAL | <input checked="" type="radio"/> Y | N | |
| DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF | Y | <input checked="" type="radio"/> N | |
| DOES THIS REQUIRE AN EXTRUSION REPORT | Y | <input checked="" type="radio"/> N | |

| CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW | | | | | |
|--|-----|-----|-------|-------|---------|
| TYPE OF MATERIAL | HRC | HRB | DUR A | DUR D | WEBSTER |
| SIZE OF TEST SAMPLE | | | | | |
| HARDNESS / DUROMETER READING | | | | | |

testers located in the Quality Office

| | | | |
|-----------------------------|----------------------|--|--|
| QC 18 INSPECTION | | ENGINEERING SIGNOFF (if required) | |
| INSPECTED BY: <u>DAS</u> | SIGNED OFF BY: _____ | | |
| DATE: <u>11 JUN 11 2018</u> | DATE: _____ | | |

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

McMASTER-CARR®

White Delrin® Acetal Resin Rod 5" Diameter

In stock
\$144.00 per ft.
8572K5



| | |
|-------------------------------|---|
| Material | Delrin® Acetal Plastic |
| Cross Section Shape | Round |
| Construction | Solid |
| Texture | Smooth |
| Color | White |
| Clarity | Opaque |
| Diameter | 5" |
| Diameter | 0" to |
| Tolerance | +0.250" |
| Tolerance Rating | Oversized |
| Length | 1 ft., 2 ft., 3 ft., 4 ft., 5 ft. |
| Hardness | Rockwell M90 |
| Hardness Rating | Hard |
| For Use Outdoors | No |
| Temperature Range | -20° to 180° F |
| Impact Strength | 1.00 ft.-lbs./in. |
| Impact Strength Rating | Good |
| Tensile Strength | 9,000 psi |
| Tensile Strength Rating | Good |

| | |
|----------------------------------|--|
| Specifications Met | ASTM D6100, NSF/ANSI Standard 51 for Food Contact, NSF/ANSI Standard 61 for Drinking Water |
| Density | 0.051 lbs./cu. in. |
| Coefficient of Friction | 0.20 |
| Dielectric Strength | 435 V/mil |
| Water Absorption | 0.30% |
| Coefficient of Thermal Expansion | 8.5×10^{-5} in./in./°F |
| RoHS | Compliant |

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : DELRIN II 150E OR ACETRON GP ACETAL

PART NUMBER :

M-DELRIN-R1-000 X DIA COLOR CODE

WHERE D.D.D.D = DIAMETER IN INCHES

B X = COLOR CODE, "W" = WHITE, OMITTED = BLACK

EG. 1" BLACK ROUND BAR = M-DELRIN-R1.000

2" WHITE ROUND BAR = M-DELRIN-R2.000W

RELEASED

2018 MAR 27 40
EJW 18-657

APPROVED

| | | | |
|------------|---|-----|----------|
| B | UPDATE DRAWING TO CURRENT STANDARDS AND MATERIAL COLOR "WHITE". ADD REASON CIPR-110, ADD "ACETRON GP ACETAL" AS OPTION (REV. A1). | SAD | 17.10.19 |
| A | NEW ISSUE | DS | 01.11.12 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | SAD | | |
| DRAWN | SAD | | |
| CHECKED | RF | | |
| MFG. APPR. | RA | | |
| APPROVED | HS | | |
| DE APPR. | CP | | |
| DATE | 17.10.19 | | |

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **M-DELRIN-R**
TITLE **DELIN ROUND BAR**
SCALE **NTS**

REV. B
SHEET 1 OF 1

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NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: Delrin 2.500

PO / BATCH NO.: 040196/5079305

DATE: JUN 11 2018

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 51
 QUANTITY INSPECTED: 51
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.500
 THICKNESS RECEIVED: 2.500
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

| DESCRIPTION | NCR (Check Y/N) | | COMMENTS |
|---|------------------------------------|------------------------------------|----------------------------------|
| SURFACE DAMAGE | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| CORRECT FINISH | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| CORROSION | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| CORRECT GRAIN DIRECTION | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| CORRECT MATERIAL PER M-DRAWING | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | <u>Delrin Acetal Rod white</u> |
| CORRECT THICKNESS | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| PHOTO REQUIRED | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| CORRECT REF # TO LINK CERT | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | <u>Lot #040196 Part #8572K32</u> |
| CORRECT MATERIAL IDENTIFICATION | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| CORRECT M# ON THE MATERIAL | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |
| DOES THIS REQUIRE AN EXTRUSION REPORT | <input checked="" type="radio"/> Y | <input checked="" type="radio"/> N | |

| CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW | | | | | |
|--|-----|-----|-------|-------|---------|
| | HRC | HRB | DUR A | DUR D | WEBSTER |
| TYPE OF MATERIAL | | | | | |
| SIZE OF TEST SAMPLE | | | | | |
| HARDNESS / DUROMETER READING | | | | | |

testers located in the Quality Office


| | | | |
|-------------------------------|----------------------|-----------------------------------|--|
| QC 18 INSPECTION | | ENGINEERING SIGNOFF (if required) | |
| INSPECTED BY: <u>DAS 11</u> | SIGNED OFF BY: _____ | | |
| DATE: <u>9-88 JUN 11 2018</u> | DATE: _____ | | |

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

McMASTER-CARR

White Delrin® Acetal Resin Rod 2-1/2" Diameter

In stock
\$30.13 per ft.
8572K32



| | |
|------------------------|---|
| Material | Delrin® Acetal Plastic |
| Cross Section Shape | Round |
| Construction | Solid |
| Texture | Smooth |
| Color | White |
| Clarity | Opaque |
| Diameter | 2 1/2" |
| Diameter | 0" to |
| Tolerance | +0.030" |
| Tolerance | Oversized |
| Rating | |
| Length | 1 ft., 2 ft., 3 ft., 4 ft., 5 ft. |
| Hardness | Rockwell M90 |
| Hardness | |
| Rating | Hard |
| For Use | No |
| Outdoors | |
| Temperature | -20° to |
| Range | 180° F |
| Impact | 1.00 |
| Strength | ft.-lbs./in. |
| Impact | |
| Strength | Good |
| Rating | |
| Tensile | |
| Strength | 9,000 psi |
| Tensile | |
| Strength | Good |
| Rating | |

| | |
|----------------------------------|--|
| Specifications Met | ASTM D6100, NSF/ANSI Standard 51 for Food Contact, NSF/ANSI Standard 61 for Drinking Water |
| Density | 0.051 lbs./cu. in. |
| Coefficient of Friction | 0.20 |
| Dielectric Strength | 435 V/mil |
| Water Absorption | 0.30% |
| Coefficient of Thermal Expansion | 8.5×10^{-5} in./in./°F |
| RoHS | Compliant |

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : DELRIN II 150E OR ACETRON GP ACETAL

PART NUMBER : M-DELRIN-R D.DDD X COLOR B
DIA CODE

WHERE D.DDD = DIAMETER IN INCHES
B X = COLOR CODE, "W" = WHITE, OMITTED = BLACK

EG. 1" BLACK ROUND BAR = M-DELRIN-R1.000
2" WHITE ROUND BAR = M-DELRIN-R2.000W

| | | | | |
|---|---|-----------------------------|-----|----------|
| B | UPDATE DRAWING TO CURRENT STANDARDS. ADD MATERIAL COLOR "WHITE". ADD REASON CIR-110. ADD "ACETRON GP ACETAL" AS OPTION (REV. A1). | | SAD | 17.10.19 |
| A | NEW ISSUE | | DS | 01.11.12 |
| REV | DESCRIPTION | | BY | DATE |
| DESIGN | SAD | DART AEROSPACE LTD | | |
| DRAWN | SAD | HAYKESBURY, ONTARIO, CANADA | | |
| CHECKED | RF | DRAWING NO. | | |
| MFG. APPR. | RA | M-DELRIN-R | | |
| APPROVED | HS | TITLE | | |
| DE APPR. | CP | DELIN ROUND BAR | | |
| DATE | 17.10.19 | SHEET 1 OF 1 | | |
| | | SCALE | | |
| | | NTS | | |
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RELEASED
2018 MAR 27 q
EWS 18-657

APPROVED

5832

SHIP
7-13

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RB PWC58104-3
Job Sheet 178434



Part No: RB PWC58104-3

Job Qty: 6 ea

Part Name: Strap



Part Weight: 0 lbs

Status: At Planning

Priority: Medium

Job Created: 5/31/18

Job Tracking No:

Due Date: 6/25/18

Created By: Logan David

Type: SOLD

Description:

Note: DWG RB PWC58104 Rev. 0 IPP Rev. A 18.05.24 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

| Op No | Operation | Qty | Start Date | Due Date | Standard | | Workcenter/Supplier | | Sign-off |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|----------|
| | | | | | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time | |
| 100 | Start up Operation | 6 Ea | | 6/25/18 | 0.00 | 0.00 | Start Up Waterjet2 | | |
| 110 | Waterjet | 6 pcs | | 6/25/18 | 0.00 | 0.60 | Waterjet 2 OMAX | | |
| 120 | QC | 6 pcs | | 6/25/18 | 0.00 | 0.00 | QC2 Waterjet-2 | | |
| 130 | QC | 6 pcs | | 6/25/18 | 0.00 | 0.00 | QC8-6 | | |
| 140 | Packaging | 6 pcs | | 6/25/18 | 0.00 | 0.00 | Packaging3 | | |
| 150 | QC21-SA | 6 Ea | | 6/25/18 | 0.00 | 0.00 | QC21 | | |

Part Op 100 -

Descriptions: 110 - 1-Cut as per Dwg Dwg Rev: _____ Prog Rev: _____ 2-Deburr if necessary

Job BOM

| Part / Item | Component Name | Quantity | Operation | Container |
|-------------|----------------|---------------------|------------------------|-----------|
| 8599K32 | Strap | .0414 sf (.0069 ea) | 100-Start up Operation | |

Job Allocations

| Operation | Component Part | Required | Inventory | Allocated |
|------------------------|----------------|----------|-----------|-----------|
| 100-Start up Operation | 8599K32 | 0 | 0 | 0 |

Part Specifications

Specifications could not be found.

Plex 5/31/18 1:05 PM dart.logan.david

98381 A718

3938



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBIR7028
Job Sheet 178594



Part No: RBIR7028

Job Qty: 4 ea

Part Name: Swashplate Bearing Install and Removal Tool



Part Weight: 0 lbs

Status: At Planning

Priority: Medium

Job Created: 6/4/18

Job Tracking No:

Due Date: 6/27/18

Created By: Logan David

Type: SOLD

Description:

Note: DWG RBIR7### Rev. 0 IPP Rev. A 18.06.04 new issue DP Verify DD

Ship Via:

SHIP
7-03

Bill of Materials

Job Routing

| Op No | Operation | Qty | Start Date | Due Date | Standard | | Workcenter/Supplier | | Sign-off |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|----------|
| | | | | | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time | |
| 90 | Start up Operation | 4 Ea | 6/27/18 | 6/27/18 | 0.00 | 0.00 | Start Up Small Fab-2 | | |
| 110 | Small Fab | 4 pcs | 6/27/18 | 6/27/18 | 0.00 | 4.00 | Small Fab-3 | | |
| 120 | QC | 4 pcs | 6/27/18 | 6/27/18 | 0.00 | 0.00 | QC5 | | |
| 130 | Packaging | 4 pcs | 6/27/18 | 6/27/18 | 0.00 | 0.00 | Packaging3-1 | | |
| 140 | QC21-SA | 4 Ea | 6/27/18 | 6/27/18 | 0.00 | 0.00 | QC21 | | |

Part Op 110 - 1-Assemble as per DWG.
Descriptions:

Job BOM

| Part / Item | Component Name | Quantity | Operation | Container |
|-------------|--|-------------|-----------------------|-----------|
| 90477A030 | Rotating Flange Nut | 4 (1 ea) | 90-Start up Operation | |
| 92865A597 | Medium-Strength Grade 5 Steel Hex Head Screw | 4 (1 ea) | 90-Start up Operation | |
| 97416A123 | Black-Oxide Steel SAE Washer | 8 (2 ea) | 90-Start up Operation | |
| RBIR7028-1 | Receiver | 4 Ea (1 ea) | 90-Start up Operation | |
| RBIR7028-3 | Remover / Installer | 4 Ea (1 ea) | 90-Start up Operation | |
| RBIR7028-5 | Alignment Seat | 4 Ea (1 ea) | 90-Start up Operation | |

Job Allocations

| Operation | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | 90477A030 | 4 | 0 | 0 |
| | 92865A597 | 4 | 0 | 0 |
| | 97416A123 | 8 | 0 | 0 |
| | RBIR7028-1 | 4 | 0 | 0 |
| | RBIR7028-3 | 4 | 0 | 0 |
| | RBIR7028-5 | 4 | 0 | 0 |

178595
178596
178597

Part Specifications

Specifications could not be found.

Plex 6/4/18 11:09 AM dart.logan.david

Chantal Lavoie

From: Daniel Paquette
Sent: Tuesday, June 05, 2018 12:04 PM
To: Michelle GagnonDonovan; Chantal Lavoie
Subject: MDELRINR2.500W Ref; RBEM632V3008102-13

Michelle please enter into PLEX. Thanks.

Chantal please order 3 feet of this. Thanks.

DANIEL PAQUETTE

Production Engineering Coordinator

DART AEROSPACE

T 1 613 632-5200 > 236

F 1 613 632-5246

1 800 556- 4166

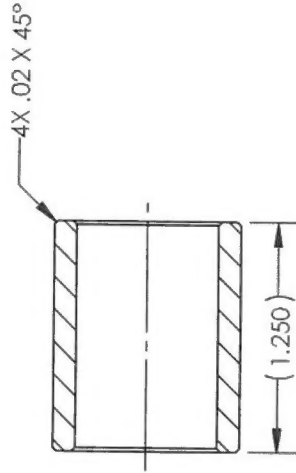
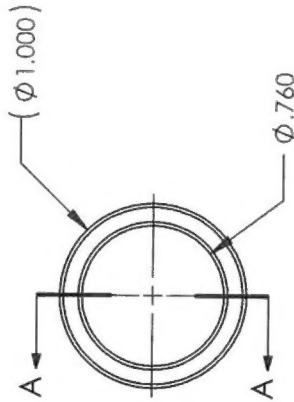
www.dartaerospace.com



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REVISIONS

| REV | ECR | DESCRIPTION | DATE |
|-----|-----|---|-----------|
| 1 | | RELEASED FOR PRODUCTION. CH'D LENGTH WAS 1.410 IS (1.250). CH'D TO MODIFIED BUYOUT. | 5/16/2017 |



SECTION A-A

NOTE:
1. REFERENCE CANAM C10_028.
2. BAG AND LABEL WITH BATCH NUMBER.



LIFTING BUSHING

| | | | |
|------------|----------------|------------------------------|--------------|
| TITLE | C10-28 | REV | 1 |
| DWG NO. | | | |
| MAT'L | SAE 660 BRONZE | UNLESS OTHERWISE SPECIFIED | |
| FINISH | | DIMENSIONS ARE IN INCHES | |
| SPEC | | XXX ± .005 FRACTIONS ± 1/8 | |
| | | XX ± .01 ANGLES ± 5° | |
| | | X ± .1 SURFACES = 125 | |
| DRAWN BY: | CANAM | 1. BREAK ALL SHARP EDGES | |
| CHECKED: | DD 05/17/2017 | 2. DIMENSIONAL LIMITS APPLY | |
| OPPS APPR: | AA 05/24/2017 | 3. INTERPRET DIM AND TOL PER | |
| QA APPR: | JL 05/24/2017 | ASME Y14.5M-2009 | |
| APPROVED: | JAG 06/01/2017 | USED ON MODEL | |
| SCALE | 1:1 | DATE | 5/30/2002 |
| | | | SHEET 1 OF 1 |

| ASSY QTY | ASSY B/O | Part # | UNIT QTY | Description | Material | B/O INFORMATION OR SPECIFICATIONS | P/G. |
|----------|----------|--------|----------|-------------|----------------|---|------|
| | | C10-28 | 1 | BUSHING | SAE 660 BRONZE | 3/4 Ø SHAFT X 1 O.D. X 1-1/4 (MCMASTER-CARR #6381K193) MOD. | X20 |

Delrin® Acetal Resin Rods



- Color: White or Black
- Temperature Range: -20° to 180° F
- Tensile Strength: 9,000 psi (Good)
- Impact Strength: 1.00 ft.-lbs./in (Good)
- For Use Outdoors: No
- Specifications Met:
 White: ASTM D6100, NSF/ANSI Standard 51 for Food Contact, NSF/ANSI Standard 61 for Drinking Water
 Black: ASTM D6100

| Dia. | Dia. Tolerance | Lengths, ft. | White | |
|--------|----------------|---------------|---------|---------|
| | | | | Per Ft. |
| 2 1/2" | 0" to +0.030" | 1, 2, 3, 4, 5 | 8572K32 | \$30.13 |



Product Detail

White Delrin® Acetal Resin Rod,
2-1/2" Diameter

Length, ft.

✓ 5

☐ Each

ADD TO ORDER

Delivers tomorrow

10-12 pm

\$150.65 Each

5832



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RB PWC58104
Job Sheet 178432



SHIP
7-13

Part No: RB PWC58104

Job Qty: 1 ea

Part Name: Wrench



Part Weight: 0 lbs

Status: At Planning

Priority: Medium

Job Created: 5/31/18

Job Tracking No:

Due Date: 7/10/18

Created By: Logan David

Type: SOLD

Description:

Note: DWG RB PWC58104 Rev. 0 IPP Rev. A 18.05.24 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

| Op No | Operation | Qty | Start Date | Due Date | Standard | | Workcenter/Supplier | | Sign-off |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|----------|
| | | | | | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time | |
| 90 | Start up Operation | 1 Ea | 7/10/18 | 7/10/18 | 0.00 | 0.00 | Start Up Small Fab-2 | | |
| 110 | Small Fab | 1 pcs | 7/10/18 | 7/10/18 | 0.00 | 1.00 | Small Fab-3 | | |
| 120 | QC | 1 pcs | 7/10/18 | 7/10/18 | 0.00 | 0.00 | QC5 | | |
| 130 | Packaging | 1 pcs | 7/10/18 | 7/10/18 | 0.00 | 0.00 | Packaging3-1 | | |
| 140 | QC21-FG | 1 Ea | 7/10/18 | 7/10/18 | 0.00 | 0.00 | QC21 | | |

Part Op 110 - 1-Assemble as per DWG.

Descriptions: 130 - Bag and tag.

Job BOM

| Part / Item | Component Name | Quantity | Operation | Container |
|---------------|----------------|-------------|-----------------------|-----------|
| 98381A503 | Dowel Pin | 1 Ea (1 ea) | 90-Start up Operation | |
| RB PWC58104-1 | Block | 1 Ea (1 ea) | 90-Start up Operation | |
| RB PWC58104-3 | Strap | 1 Ea (1 ea) | 90-Start up Operation | |

Job Allocations

| Operation | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | 98381A503 | 1 | 0 | 0 |
| | RB PWC58104-1 | 1 | 0 | 0 |
| | RB PWC58104-3 | 1 | 0 | 0 |

Part Specifications

Specifications could not be found.

Plex 5/31/18 1:03 PM dart.logan.david

90293 A113

81166 A250

mdelvin 5.0000 x3 ft